REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 12, 14, 15, 17-19, 24, 27, 29, and 30 have been canceled without prejudice or disclaimer, and claims 1, 2, 4, 5, 7, 11, 13, 16, 20, 21, 23, 25, 26, and 28 have been amended. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-11, 13, 16, 20-23, 25, 26, and 28 are pending and under consideration.

ALLOWABLE SUBJECT MATTER:

In the Office Action, at page 9, item 9, the Examiner indicated that claims 7-10, and 30 are allowed. The Examiner also indicated that claims 2, 3, 5, 6, 12, 13, 19-22, 24, 25, 27, and 28 would be allowable if rewritten in independent form. Applicants hold rewriting of these claims in abeyance until the Examiner has had the opportunity to review the arguments presented herein.

REJECTION UNDER 35 U.S.C. §102:

In the Office Action, at page 2, item 5, the Examiner rejected claim 29 under 35 U.S.C. §102(e) as being anticipated by Chu et al., (U.S. Patent No. 6,791,778 – hereinafter Chu). The reasons for the rejection are set forth in the Office Action and therefore not repeated. Applicants traverse this rejection and respectfully request reconsideration.

Claim 29 has been cancelled.

REJECTION UNDER 35 U.S.C. §103:

In the Office Action, at page 3, item 8, the Examiner rejected claims 1, 4, 11, 14-18, 23, and 26 under 35 U.S.C. §103(a) as being unpatentable over Miles. (U.S. Patent No. 6,714,369 – hereinafter Miles) in view of Chu. The reasons for the rejection are set forth in the Office Action and therefore not repeated. Applicants traverse this rejection and respectfully request reconsideration.

As a general matter, to establish a prima facie obviousness rejection, the Examiner needs to provide evidence of the existence of individual elements corresponding to the recited limitations, a motivation to combine the individual elements to create the recited invention, and a reasonable expectation of success. (See MPEP, at 2143. – "'[t]he teaching or suggestion to

make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.' In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).", and at 2143.03 – "'[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.' In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).").

Should the Examiner fail to provide evidence that the individual elements exist in the prior art, or that the motivation exists in the prior art or in the knowledge generally available to one of ordinary skill in the art, then the Examiner has not provided sufficient evidence to maintain a prima facie obviousness rejection of the claim. (See MPEP, at 2143.03, and 2143.01).

Independent claim 1 recites: "…centering on a cylinder of the disc having skew '0', sequentially writing servo information toward the cylinder having skew '0' from an outer surface in an outer region, and sequentially writing the servo information toward the cylinder having skew '0' from an inner surface in an inner region; after the writing the servo information is completed, inspecting the servo information written in a cylinder at a predetermined distance from the cylinder having skew '0', and determining whether the servo information is correctly written; and if errors occur in the cylinder at the predetermined distance from the cylinder having skew '0', determining that all of the servo information is not correctly written, and writing the servo information again."

Independent claim 4 recites: "…sequentially writing servo information from a cylinder of the disc having a least number to a cylinder having skew '0'; after writing the servo information to the cylinder having skew '0', moving a head to a cylinder having the largest number; sequentially writing the servo information from the cylinder having a largest number to a cylinder prior to the cylinder having skew '0'; after writing all the servo information, inspecting the servo information written in a cylinder at a predetermined distance from the cylinder having skew '0', and determining whether the servo information is correctly written; and if errors occur in the cylinder at the predetermined distance from the cylinder having skew '0', determining that all of the servo information is not correctly written, and writing the servo information again."

Independent claim 11 recites: "…a controller that controls the transducer to sequentially write servo information toward a cylinder of the disc having skew '0' from an outer portion of the surface in an outer region of the disc, sequentially write servo information toward the cylinder having skew '0' from an inner portion of the surface in an inner region of the disc…a software and a hardware unit that allows the controller to perform…if an error occurs, a second operation

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of determining whether the number of the cylinder in which the error occurs corresponds to a cylinder at a predetermined distance from the cylinder having skew '0', if the number of the cylinder in which the errors occur corresponds to the cylinder at the predetermined distance from the cylinder having skew '0', a third operation of determining that all of the servo information is not correctly written and writing the servo information again, and if not, track-defect-processing the cylinder in which the error occurs and moving the transducer to a next cylinder, and repeating the first, second, and third operations, and if the cylinder in which the servo information in the first operation is inspected corresponds to a cylinder having a largest number, a fourth operation of track-defect-processing cylinders within a predetermined distance from the cylinder having skew '0'."

Independent claim 16 recites: "...writing servo information on sequential tracks in a first radial direction of the disc toward the skew zero track, until servo information is written on the skew zero track; writing servo information on sequential tracks in a second radial direction of the disc, opposite the first direction, toward the skew zero track, until servo information is written on a track immediately preceding the skew zero track...inspecting the servo information on each track, if an abnormality in the servo information is determined on a given track, determining whether the given track is located at a predetermined distance from the skew zero track; if the given track is not located at the predetermined distance from the skew zero track, track-defect-processing the given track, if the given track is located at the predetermined distance from the skew zero track, rewriting all of the servo information, and inspecting the servo information again, and once all tracks are inspected and no abnormality is found on the track at the predetermined distance from the skew zero track, track-defect-processing all tracks within the predetermined distance from the skew zero track."

Independent claim 23 recites: "...a controller, controlling the reading and writing head to write servo information on sequential tracks in a first radial direction of the disc toward a skew zero track until servo information is written on the skew zero track; write servo information on sequential tracks in a second radial direction of the disc, opposite the first direction, toward the skew zero track, until servo information is written on a track immediately preceding the skew zero track...wherein controlling the reading and writing head to inspect the servo information to determine if the predetermined tolerance of the writing of the servo information was exceeded includes controlling the reading and writing head to inspect the servo information on each track; if an abnormality in the servo information is determined on a given track, determine whether the given track is located at a predetermined distance from the skew zero track; if the given track is

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not located at the predetermined distance from the skew zero track, track-defect-process the given track; if the given track is located at the predetermined distance from the skew zero track, rewrite all of the servo information, and inspect the servo information again, and once all tracks are inspected, track-defect-process all tracks within the predetermined distance from the skew zero track."

And independent claim 26 recites: "...a second set of instructions to write servo information on sequential tracks in a first radial direction of the disc toward the skew zero track until servo information is written on the skew zero track; and a third set of instructions to write servo information on sequential tracks in a second radial direction of the disc, opposite the first direction, toward the skew zero track, until servo information is written on a track immediately preceding the skew zero track...wherein the fourth set of instructions includes a fifth set of instructions to inspect servo information on each track; a sixth set of instructions, that, if an abnormality in the servo information is determined on a given track, determines whether the given track is located at a predetermined distance from the skew zero track; a seventh set of instructions, that, if the given track is not located at the predetermined distance from the skew zero track, track-defect-processes the given track; an eighth set of instructions, that, if the given track is located at the predetermined distance from the skew zero track, rewrites all of the servo information, and inspects the servo information again; and a ninth set of instructions, that once all tracks are inspected, track-defect-processes all tracks within the predetermined distance from the skew zero track."

Chu discloses a method, apparatus, and computer program product for a hard disk drive defect detection system. Servo bits of a plurality of sectors are read, and a burst measure for one or more of the sectors us determined, where the burst measure is a function of the burst signals provided by the servo bits for each of the sectors. Additionally, a reference value is determined, in which the reference value is a function of the burst measures for the sectors. The burst measure for a given sector is then compared to the reference value, and if a predetermined tolerance is exceeded, the given sector is marked as defective. (See Chu, at Abstract, col. 2, line 59 to col. 3, line 5, and col. 4, lines 24-61).

Miles discloses a method and apparatus in which a first clock track is written to a position (MD – middle diameter) in between an inner diameter (ID) and an outer diameter (OD) of a disk 4, preferably where a skew angle is minimized, most preferably zero. Then, subsequent clock tracks are written toward either the ID or the OD, but in either case, away from the MD. Then, once the ID or OD is reached, clock tracks are written from the MD toward the remaining of the

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ID or OD. (See Miles, at col. 6, line 59 to col. 7, line 25, col. 8, lines 40-48, and 61-65) Servo data is optionally written in an interleaved manner with the writing of the clock tracks. (See Miles, at col. 9, lines 7-10).

In contrast, in the claimed invention, servo information is written toward the cylinder having skew '0' from an outer surface in an outer region of a disk, and toward the cylinder having skew '0' from an inner surface in an inner region of a disk.

Applicants respectfully submit that Miles neither discloses nor suggests the claimed invention.

Chu fails to cure this defect.

Thus, even the combination of Miles and Chu fails to disclose every element of the claims, arranged as required by the claims.

Additionally, Miles purposefully writes the clock tracks in two passes, starting from an approximately central position, writing first to one edge, returning to the start position, and then writing to the other edge, so that the varying skew angle aids clock recovery by maximizing the read back signal amplitude at all times, thereby ensuring that signal read back at any point on the disk has the largest possible value given the constraints on the design of the head disk assembly. (See Miles, at col. 8, line 66 to col. 9, line 7).

Further, Miles indicates that for self-clocking methods, it is necessary to read clock data from a previously written track while writing clock data, in an interleaved manner, to the next (present) track. (See Miles, at col. 2, lines 26-29). Applicants respectfully submit that while the above-noted description in Miles refers to described related art, the disclosed and claimed invention of Miles is such a self-clocking method, and the statement therefore applies to the disclosed and claimed invention.

Accordingly, Applicants respectfully submit that Miles teaches away from the subject application.

Further still, contrary to the Examiner's assertion, as noted in the section regarding the rejection under 35 U.S.C. §102, Chu neither discloses nor suggests information regarding a skew zero track, and thus neither discloses nor suggests a relation between a given track being inspected and a skew zero track.

Yet further still, neither Miles nor Chu, either alone or in combination, disclose or suggest that if errors occur in the cylinder at the predetermined distance from the cylinder having skew

'0', determining that all of the servo information is not correctly written, and writing the servo information again.

Accordingly, Applicants respectfully submit that the Examiner has failed to provide evidence that the individual elements exist in the prior art, and thus, the Examiner has not provided sufficient evidence to maintain a prima facie obviousness rejection of the claims.

Applicants respectfully submit that independent claims 1, 4, 7, 11, 16, 21, 23, and 26 patentably distinguish over the cited art, and should be allowable for at least the above-mentioned reasons.

CONCLUSION:

In accordance with the foregoing, Applicants respectfully submit that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the cited art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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